

## LG Chemical IH830C PMMA, General Purpose Grade for Injection Molding

Categories: [Polymer](#); [Thermoplastic](#); [Acrylic \(PMMA\)](#); [Acrylic, General Purpose, Molded](#)

- Material Notes:**
- Highest of all grades in heat resistance
  - Mechanical strength and surface hardness
  - Particularly recommended for tail lamp, reflectors, and general lighting fixtures

**Features:**

- Excellent transparency and elegance
- Weather resistance and chemical resistance
- Surface hardness and coloring property
- Superior electrical resistance and mechanical properties
- No harm caused

**Applications:**

- Automotive Parts:
  - Rear lamp cover
  - Turn signal lamp cover
  - Indoor lamp cover
  - Rear quarter glass
  - Automotive badge
- Electric or Electronic Parts:
  - LCD light guide plate
  - Microwave oven door/front panel
  - Cassette door
  - VCR cover/front panel
  - Car stereo panel
  - Dial scale
  - Light pipe
- Sheet:
  - Signboard
  - Showcase
  - Light dome
  - Aquarium
  - Picture frame
- Lighting and Miscellaneous:
  - Solid surface
  - Lighting cover
  - Ornaments
  - Watch crystal
  - Optical lens
  - Piano keyboard

Information Provided by LG Chem

**Vendors:** No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Water Absorption	0.30 %	0.30 %	24 hours; ASTM D570
Linear Mold Shrinkage	0.0020 - 0.0060 cm/cm	0.0020 - 0.0060 in/in	ASTM D955
Melt Index of Compound	2.0 g/10 min @Load 3.80 kg, Temperature 230 °C	2.0 g/10 min @Load 8.38 lb, Temperature 446 °F	ASTM D1238
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	99	99	ASTM D785
Tensile Strength at Break	75.0 MPa	10900 psi	ASTM D638
Elongation at Break	14 %	14 %	ASTM D638
Flexural Strength	143 MPa	20700 psi	ASTM D790
Flexural Modulus	3.333 GPa	483.4 ksi	ASTM D790
Izod Impact, Notched	0.147 J/cm	0.275 ft-lb/in	ASTM D256
Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	4.0 @Frequency 60 Hz	4.0 @Frequency 60 Hz	ASTM D150
Dielectric Strength	20.0 kV/mm	508 kV/in	4kV/s; ASTM D149
Dissipation Factor	0.050 @Frequency 60 Hz	0.050 @Frequency 60 Hz	ASTM D150

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 $^\circ\text{C}$	33.3 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 $^\circ\text{F}$	ASTM D696
Deflection Temperature at 1.8 MPa (264 psi)	103 $^\circ\text{C}$	217 $^\circ\text{F}$	ASTM D648
Vicat Softening Point	113 $^\circ\text{C}$	235 $^\circ\text{F}$	1 kg; ASTM D1525
Annealing Point	80.0 - 90.0 $^\circ\text{C}$	176 - 194 $^\circ\text{F}$	3-5 hours

Optical Properties	Metric	English	Comments
Refractive Index	1.49	1.49	ASTM D542
Haze	0.50 % @Thickness 3.20 mm	0.50 % @Thickness 0.126 in	ASTM D1003
Transmission, Visible	93 % @Thickness 3.20 mm	93 % @Thickness 0.126 in	ASTM D1003

Processing Properties	Metric	English	Comments
Processing Temperature	220 - 260 $^\circ\text{C}$	428 - 500 $^\circ\text{F}$	Injection molding cylinder temperature
Mold Temperature	70.0 - 80.0 $^\circ\text{C}$	158 - 176 $^\circ\text{F}$	
Drying Temperature	80.0 - 90.0 $^\circ\text{C}$	176 - 194 $^\circ\text{F}$	
Dry Time	4 - 6 hour	4 - 6 hour	
Injection Pressure	78.45 - 147.1 MPa	11380 - 21340 psi	

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.